

Supplement No. 1 to Part 126

Supplement No. 1*				
USML Category	Exclusion	(CA) §126.5	[Reserved for (AS) §126.16]	(UK) §126.17
I-XXI	Classified defense articles and services. <i>See Note 1.</i>	X		X
I-XXI	Defense articles listed in the Missile Technology Control Regime (MTCR) Annex.	X		X
I-XXI	U.S. origin defense articles and services used for marketing purposes and not previously licensed for export in accordance with this subchapter.			X
I-XXI	Defense services for or technical data related to defense articles identified in this supplement as excluded from the Canadian exemption.	X		
I-XXI	Any transaction involving the export of defense articles and services for which congressional notification is required in accordance with §123.15 and §124.11 of this subchapter.	X		
I-XXI	U.S. origin defense articles and services specific to developmental systems that have not obtained written Milestone B approval from the U.S. Department of Defense milestone approval authority, unless such export is pursuant to a written solicitation or contract issued or			X

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	awarded by the U.S. Department of Defense for an end use identified in subsections (e)(1), (2), or (4) of §126.16 or §126.17 of this subchapter and is consistent with other exclusions of this supplement.			
I-XXI	Nuclear weapons strategic delivery systems and all components, parts, accessories, and attachments specifically designed for such systems and associated equipment.	X		
I-XXI	Defense articles and services specific to the existence or method of compliance with anti-tamper measures made at U.S. Government direction.			X
I-XXI	Defense articles and services specific to reduced observables or counter low observables in any part of the spectrum. <i>See Note 2.</i>			X
I-XXI	Defense articles and services specific to sensor fusion beyond that required for display or identification correlation. <i>See Note 3.</i>			X
I-XXI	Defense articles and services specific to the automatic target acquisition or recognition and cueing of multiple autonomous unmanned systems.			X
I-XXI	Nuclear power generating equipment or propulsion equipment (e.g., nuclear reactors), specifically designed for military use and components therefore,			X

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	specifically designed for military use. <i>See</i> also §123.20 of this subchapter.			
I-XXI	Libraries (parametric technical databases) specially designed for military use with equipment controlled on the USML. <i>See</i> Note 13.			X
I-XXI	Defense services or technical data specific to applied research as defined in §125.4(c)(3) of this subchapter, design methodology as defined in §125.4(c)(4) of this subchapter, engineering analysis as defined in §125.4(c)(5) of this subchapter, or manufacturing know-how as defined in §125.4(c)(6) of this subchapter. <i>See</i> Note 12.	X		
I-XXI	Defense services other than those required to prepare a quote or bid proposal in response to a written request from a Department or Agency of the United States Federal Government or from a Canadian Federal, Provincial, or Territorial Government; or defense services other than those required to produce, design, assemble, maintain or service a defense article for use by a registered U.S. company, or a U.S. Federal Government Program, or for end-use in a Canadian Federal, Provincial, or Territorial Government Program. <i>See</i> Note 14.	X		
I	Defense articles and services related to	X		

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	firearms, close assault weapons, and combat shotguns.			
II(k)	Software source code related to Categories II(c), II(d), or II(i). <i>See Note 4.</i>			X
II(k)	Manufacturing know-how related to Category II(d). <i>See Note 5.</i>	X		X
III	Defense articles and services related to ammunition for firearms, close assault weapons, and combat shotguns listed in Category I.	X		
III	Defense articles and services specific to ammunition and fuse setting devices for guns and armament controlled in Category II.			X
III(e)	Manufacturing know-how related to Categories III(d)(1) or III(d)(2) and their specially designed components. <i>See Note 5.</i>	X		X
III(e)	Software source code related to Categories III(d)(1) or III(d)(2). <i>See Note 4.</i>			X
IV	Defense articles and services specific to man-portable air defense systems (MANPADS). <i>See Note 6.</i>	X		X
IV	Defense articles and services specific to rockets, designed or modified for non-military applications that do not have a range of 300 km (i.e., not controlled on the MTCR Annex).			X
IV	Defense articles and services specific to			X

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	torpedoes.			
IV	Defense articles and services specific to anti-personnel landmines.	X		X
IV	Defense Articles specific to cluster munitions that are controlled by The Convention on Cluster Munitions of 3 December 2008.	X		X
IV(i)	Software source code related to Categories IV(a), IV(b), IV(c), or IV(g). <i>See Note 4.</i>			X
IV(i)	Manufacturing know-how related to Categories IV(a), IV(b), IV(d), or IV(g) and their specially designed components. <i>See Note 5.</i>	X		X
V	The following energetic materials and related substances: <ul style="list-style-type: none"> a. TATB (triaminotrinitrobenzene) (CAS 3058-38-6); b. Explosives controlled in USML Category V(a)(32) or V(a)(33); c. Iron powder (CAS 7439-89-6) with particle size of 3 micrometers or less produced by reduction of iron oxide with hydrogen; d. BOBBA-8 (bis(2-methylaziridiny)2-(2-hydroxypropanoxy) propylamino phosphine oxide), and other MAPO derivatives; e. N-methyl-p-nitroaniline (CAS 100-15-2); or 			X

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	f. Trinitrophenylmethylnitramine (tetryl) (CAS 479-45-8)			
V(c)(7)	Pyrotechnics and pyrophorics specifically formulated for military purposes to enhance or control radiated energy in any part of the IR spectrum.			X
V(d)(3)	Bis-2, 2-dinitropropylnitrate (BDNPN).			X
VI	Defense articles specific to cryogenic equipment, and specially designed components or accessories therefor, specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion and of producing or maintaining temperatures below 103 K (-170°C).			X
VI	Defense Articles specific to superconductive electrical equipment (rotating machinery and transformers) specially designed or configured to be installed in a vehicle for military ground, marine, airborne, or space applications and capable of operating while in motion. This, however, does not include direct current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only			X

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	superconducting component in the generator.			
VI	Defense articles and services specific to naval technology and systems relating to acoustic spectrum control and awareness. <i>See</i> Note 10.			X
VI(a)	Nuclear powered vessels.	X		X
VI(c)	Defense articles and services specific to submarine combat control systems.			X
VI(d)	Harbor entrance detection devices.			X
VI(e)	Defense articles and services specific to naval nuclear propulsion equipment. <i>See</i> Note 7.	X		X
VI(g)	Technical data and defense services for gas turbine engine hot sections related to Category VI(f). <i>See</i> Note 8.	X		X
VI(g)	Software source code related to Categories VI(a) or VI(c). <i>See</i> Note 4.			X
VII	Defense articles specific to cryogenic equipment, and specially designed components or accessories therefor, specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion and of producing or maintaining temperatures below 103 K (-170°C).			X
VII	Defense articles specific to superconductive electrical equipment (rotating machinery and transformers)			X

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	<p>specially designed or configured to be installed in a vehicle for military ground, marine, airborne, or space applications and capable of operating while in motion. This, however, does not include direct current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting component in the generator.</p>			
VII	<p>Armored all wheel drive vehicles, other than vehicles specifically designed or modified for military use, fitted with, or designed or modified to be fitted with, a plough or flail for the purpose of land mine clearance.</p>			X
VII(e)	<p>Amphibious vehicles.</p>			X
VII(f)	<p>Technical data and defense services for gas turbine engine hot sections. <i>See</i> Note 8.</p>	X		X
VIII	<p>Defense articles specific to cryogenic equipment, and specially designed components and accessories therefor, specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion and</p>			X

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	of producing or maintaining temperatures below 103 K (-170°C).			
VIII	Defense articles specific to superconductive electrical equipment (rotating machinery and transformers) specially designed or configured to be installed in a vehicle for military ground, marine, airborne, or space applications and capable of operating while in motion. This, however, does not include direct current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting component in the generator.			X
VIII(a)	All Category VIII(a) items.	X		
VIII(b)	Defense articles and services specific to gas turbine engine hot section components and digital engine controls. <i>See Note 8.</i>			X
VIII(f)	Developmental aircraft, engines and components identified in Category VIII(f).	X		
VIII(g)	Ground Effect Machines (GEMS).			X
VIII(i)	Technical data and defense services for gas turbine engine hot sections related to Category VIII(b). <i>See Note 8.</i>	X		X
VIII(i)	Manufacturing know-how related to	X		X

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	Categories VIII(a), VIII(b), or VIII(e) and their specially designed components. <i>See Note 5.</i>			
VIII(i)	Software source code related to Categories VIII(a) or VIII(e). <i>See Note 4.</i>			X
IX	Training or simulation equipment for MANPADS. <i>See Note 6.</i>			X
IX(e)	Software source code related to Categories IX(a) or IX(b). <i>See Note 4.</i>			X
IX(e)	Software that is both specifically designed or modified for military use and specifically designed or modified for modeling or simulating military operational scenarios.			X
X(e)	Manufacturing know-how related to Categories X(a)(1) or X(a)(2) and their specially designed components. <i>See Note 5.</i>	X		X
XI(a)	Defense articles and services specific to countermeasures and counter-countermeasures <i>See Note 9.</i>			X
XI	Defense articles and services specific to naval technology and systems relating to acoustic spectrum control and awareness. <i>See Note 10.</i>			X
XI(b) XI(c) XI(d)	Defense articles and services specific to communications security (e.g., COMSEC and TEMPEST).			X
XI(d)	Software source code related to Category XI(a). <i>See Note 4.</i>			X

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XI(d)	Manufacturing know-how related to Categories XI(a)(3) or XI(a)(4) and their specially designed components. <i>See</i> Note 5.	X		X
XII	Defense articles and services specific to countermeasures and counter-countermeasures. <i>See</i> Note 9.			X
XII(c)	Defense articles and services specific to XII(c) articles, except any 1st- and 2nd-generation image intensification tubes and 1st- and 2nd-generation image intensification night sighting equipment. End items in XII(c) and related technical data limited to basic operations, maintenance, and training information as authorized under the exemption in §125.4(b)(5) of this subchapter may be exported directly to a Canadian Government entity (i.e., federal, provincial, territorial, or municipal) consistent with §126.5, other exclusions, and the provisions of this subchapter.	X		
XII(c)	Technical data or defense services for night vision equipment beyond basic operations, maintenance, and training data. However, the AS and UK Treaty exemptions apply when such export is pursuant to a written solicitation or contract issued or awarded by the U.S. Department of Defense for an end use identified in subsections (e)(1), (2), or	X		X

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	(4) of §126.16 or §126.17 of this subchapter and is consistent with other exclusions of this supplement.			
XII(f)	Manufacturing know-how related to Category XII(d) and their specially designed components. <i>See</i> Note 5.	X		X
XII(f)	Software source code related to Categories XII(a), XII(b), XII(c), or XII(d). <i>See</i> Note 4.			X
XIII(b)	Defense articles and services specific to Military Information Security Assurance Systems.			X
XIII(c)	Defense articles and services specific to armored plate manufactured to comply with a military standard or specification or suitable for military use. <i>See</i> Note 11.			X
XIII(d)	Carbon/carbon billets and preforms which are reinforced in three or more dimensional planes, specifically designed, developed, modified, configured or adapted for defense articles.			X
XIII(f)	Structural materials.			X
XIII(g)	Defense articles and services related to concealment and deception equipment and materials.			X
XIII(h)	Energy conversion devices other than fuel cells.			X
XIII(i)	Metal embrittling agents.			X
XIII(j)	Defense articles and services related to hardware associated with the			X

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	measurement or modification of system signatures for detection of defense articles as described in Note 2.			
XIII(k)	Defense articles and services related to tooling and equipment specifically designed or modified for the production of defense articles identified in Category XIII(b).			X
XIII(l)	Software source code related to Category XIII(a). <i>See</i> Note 4.			X
XIV	Defense articles and services related to toxicological agents, including chemical agents, biological agents, and associated equipment.			X
XIV(a) XIV(b) XIV(d) XIV(e) XIV(f)	Chemical agents listed in Category XIV(a), (d) and (e), biological agents and biologically derived substances in Category XIV(b), and equipment listed in Category XIV(f) for dissemination of the chemical agents and biological agents listed in Category XIV(a), (b), (d), and (e).	X		
XV(a)	Defense articles and services specific to spacecraft/satellites. However, the Canadian exemption may be used for commercial communications satellites that have no other type of payload.	X		X
XV(b)	Defense articles and services specific to ground control stations for spacecraft telemetry, tracking, and control.			X
XV(c)	Defense articles and services specific to			X

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	GPS/PPS security modules.			
XV(c)	Defense articles controlled in XV(c) except end items for end use by the Federal Government of Canada exported directly or indirectly through a Canadian-registered person.	X		
XV(d)	Defense articles and services specific to radiation-hardened microelectronic circuits.	X		X
XV(e)	Anti-jam systems with the ability to respond to incoming interference by adaptively reducing antenna gain (nulling) in the direction of the interference.	X		
XV(e)	Antennas having any of the following: (a) Aperture (overall dimension of the radiating portions of the antenna) greater than 30 feet; (b) All sidelobes less than or equal to -35 dB relative to the peak of the main beam; or (c) Designed, modified, or configured to provide coverage area on the surface of the earth less than 200 nautical miles in diameter, where “coverage area” is defined as that area on the surface of the earth that is illuminated by the main beam width of the antenna (which is the angular distance between half	X		

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	power points of the beam).			
XV(e)	Optical intersatellite data links (cross links) and optical ground satellite terminals.	X		
XV(e)	Spaceborne regenerative baseband processing (direct up and down conversion to and from baseband) equipment.	X		
XV(e)	Propulsion systems which permit acceleration of the satellite on-orbit (i.e., after mission orbit injection) at rates greater than 0.1 g.	X		
XV(e)	Attitude control and determination systems designed to provide spacecraft pointing determination and control or payload pointing system control better than 0.02 degrees per axis.	X		
XV(e)	All specifically designed or modified systems, components, parts, accessories, attachments, and associated equipment for all Category XV(a) items, except when specifically designed or modified for use in commercial communications satellites.	X		
XV(e)	Defense articles and services specific to spacecraft and ground control station systems (only for telemetry, tracking and control as controlled in XV(b)), subsystems, components, parts, accessories, attachments, and associated equipment.			X

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XV(f)	Technical data and defense services directly related to the other defense articles excluded from the exemptions for Category XV.	X		X
XVI	Defense articles and services specific to design and testing of nuclear weapons.	X		X
XVI(c)	Nuclear radiation measuring devices manufactured to military specifications.	X		
XVI(e)	Software source code related to Category XVI(c). <i>See</i> Note 4.			X
XVII	Classified articles and defense services not elsewhere enumerated. <i>See</i> Note 1.	X		X
XVIII	Defense articles and services specific to directed energy weapon systems.			X
XX	Defense articles and services related to submersible vessels, oceanographic, and associated equipment.	X		X
XXI	Miscellaneous defense articles and services.	X		X

Note 1: Classified defense articles and services are not eligible for export under the Canadian exemptions. U.S. origin defense articles and services controlled in Category XVII are not eligible for export under the UK Treaty exemption. U.S. origin classified defense articles and services are not eligible for export under either the UK or AS Treaty exemptions except when being released pursuant to a U.S. Department of Defense written request, directive, or contract that provides for the export of the defense article or service.

Note 2: The phrase “any part of the spectrum” includes radio frequency (RF), infrared (IR), electro-optical, visual, ultraviolet (UV), acoustic, and magnetic. Defense articles related to reduced observables or counter reduced observables are defined as:

- a. Signature reduction (radio frequency (RF), infrared (IR), Electro-Optical, visual, ultraviolet (UV), acoustic, magnetic, RF emissions) of defense platforms, including

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systems, subsystems, components, materials, (including dual-purpose materials used for Electromagnetic Interference (EM) reduction) technologies, and signature prediction, test and measurement equipment and software and material transmissivity/reflectivity prediction codes and optimization software.

- b. Electronically scanned array radar, high power radars, radar processing algorithms, periscope-mounted radar systems (PATRIOT), LADAR, multistatic and IR focal plane array-based sensors, to include systems, subsystems, components, materials, and technologies.

Note 3: Defense Articles related to sensor fusion beyond that required for display or identification correlation is defined as techniques designed to automatically combine information from two or more sensors/sources for the purpose of target identification, tracking, designation, or passing of data in support of surveillance or weapons engagement. Sensor fusion involves sensors such as acoustic, infrared, electro optical, frequency, etc. Display or identification correlation refers to the combination of target detections from multiple sources for assignment of common target track designation.

Note 4: Software source code beyond that source code required for basic operation, maintenance, and training for programs, systems, and/or subsystems is not eligible for use of the UK or AS Treaty Exemptions, unless such export is pursuant to a written solicitation or contract issued or awarded by the U.S. Department of Defense for an end use identified in subsections (e)(1), (2), or (4) of §126.16 or §126.17 of this subchapter and is consistent with other exclusions of this supplement.

Note 5: Manufacturing know-how, as defined in §125.4(c)(6) of this subchapter, is not eligible for use of the UK or AS Treaty Exemptions, unless such export is pursuant to a written solicitation or contract issued or awarded by the U.S. Department of Defense for an end use identified in subsections (e)(1), (2), or (4) of §126.16 or §126.17 of this subchapter and is consistent with other exclusions of this supplement.

Note 6: Defense Articles specific to Man Portable Air Defense Systems (MANPADS) includes missiles which can be used without modification in other applications. It also includes production and test equipment and components specifically designed or modified for MANPAD systems, as well as training equipment specifically designed or modified for MANPAD

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systems.

Note 7: Naval nuclear propulsion plants includes all of USML Category VI(e). Naval nuclear propulsion information is technical data that concerns the design, arrangement, development, manufacture, testing, operation, administration, training, maintenance, and repair of the propulsion plants of naval nuclear-powered ships and prototypes, including the associated shipboard and shore-based nuclear support facilities. Examples of defense articles covered by this exclusion include nuclear propulsion plants and nuclear submarine technologies or systems; nuclear powered vessels (*see* USML Categories VI and XX).

Note 8: Examples of gas turbine engine hot section exempted defense article components and technology are combustion chambers/liners; high pressure turbine blades, vanes, disks and related cooled structure; cooled low pressure turbine blades, vanes, disks and related cooled structure; advanced cooled augmenters; and advanced cooled nozzles. Examples of gas turbine engine hot section developmental technologies are Integrated High Performance Turbine Engine Technology (IHPTET), Versatile, Affordable Advanced Turbine Engine (VAATE), Ultra-Efficient Engine Technology (UEET).

Note 9: Examples of countermeasures and counter-countermeasures related to defense articles not exportable under the AS or UK Treaty exemptions are:

- a. IR countermeasures;
- b. Classified techniques and capabilities;
- c. Exports for precision radio frequency location that directly or indirectly supports fire control and is used for situation awareness, target identification, target acquisition, and weapons targeting and Radio Direction Finding (RDF) capabilities. Precision RF location is defined as angle of arrival accuracy of less than five degrees (RMS) and RF emitter location of less than ten percent range error;
- d. Providing the capability to reprogram; and
- e. Acoustics (including underwater), active and passive countermeasures, and counter-countermeasures.

Note 10: Examples of defense articles covered by this exclusion include underwater acoustic vector sensors; acoustic reduction; off-board, underwater, active and passive sensing, propeller/propulsor technologies; fixed mobile/floating/powered detection systems which

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include in-buoy signal processing for target detection and classification; autonomous underwater vehicles capable of long endurance in ocean environments (manned submarines excluded); automated control algorithms embedded in on-board autonomous platforms which enable (a) group behaviors for target detection and classification, (b) adaptation to the environment or tactical situation for enhancing target detection and classification; "intelligent autonomy" algorithms which define the status, group (greater than 2) behaviors, and responses to detection stimuli by autonomous, underwater vehicles; and low frequency, broad-band "acoustic color," active acoustic "fingerprint" sensing for the purpose of long range, single pass identification of ocean bottom objects, buried or otherwise. (Controlled under Category XI(a), (1) and (2) and in (b), (c), and (d)).

Note 11: The defense articles include constructions of metallic or non-metallic materials or combinations thereof specially designed to provide protection for military systems. The phrase "suitable for military use" applies to any articles or materials which have been tested to level IIIA or above IAW NIJ standard 0108.01 or comparable national standard. This exclusion does not include military helmets, body armor, or other protective garments which may be exported IAW the terms of the AS or UK Treaties.

Note 12: Defense services or technical data specific to applied research (§125.4(c)(3)), design methodology (§125.4(c)(4)), engineering analysis (§125.4(c)(5)), or manufacturing know-how (§125.4(c)(6)) are not eligible for export under the Canadian exemptions. However, this exclusion does not include defense services or technical data specific to build-to-print as defined in §125.4(c)(1), build/design-to-specification as defined in §125.4(c)(2), or basic research as defined in §125.4(c)(3), or maintenance (i.e., inspection, testing, calibration or repair, including overhaul, reconditioning and one-to-one replacement of any defective items parts or components, but excluding any modification, enhancement, upgrade or other form of alteration or improvement that changes the basic performance of the item) of non-excluded defense articles which may be exported subject to other exclusions or terms of the Canadian exemptions.

Note 13: The term 'libraries' (parametric technical databases) means a collection of technical information of a military nature, reference to which may enhance the performance of military equipment or systems.

Note 14: In order to utilize the authorized defense services under the Canadian exemption, the

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following must be complied with:

- 1) The Canadian contractor and subcontractor must certify, in writing, to the U.S. exporter that the technical data and defense services being exported will be used only for an activity identified in Supplement No. 1 and in accordance with 22 CFR 126.5; and
- 2) A written arrangement between the U.S. exporter and the Canadian recipient must:
 - a. Limit delivery of the defense articles being produced directly to an identified manufacturer in the United States registered in accordance with part 122 of this subchapter; a Department or Agency of the United States Federal Government; a Canadian-registered person authorized in writing to manufacture defense articles by and for the Government of Canada; a Canadian Federal, Provincial, or Territorial Government;
 - b. Prohibit the disclosure of the technical data to any other contractor or subcontractor who is not a Canadian-registered person;
 - c. Provide that any subcontract contain all the limitations of §126.5;
 - d. Require that the Canadian contractor, including subcontractors, destroy or return to the U.S. exporter in the United States all of the technical data exported pursuant to the contract or purchase order upon fulfillment of the contract, unless for use by a Canadian or United States Government entity that requires in writing the technical data be maintained. The U.S. exporter must be provided written certification that the technical data is being retained or destroyed; and
 - e. Include a clause requiring that all documentation created from U.S. origin technical data contain the statement that “This document contains technical data, the use of which is restricted by the U.S. Arms Export Control Act. This data has been provided in accordance with, and is subject to, the limitations specified in §126.5 of the International Traffic in Arms Regulations (ITAR). By accepting this data, the consignee agrees to honor the requirements of the ITAR.”
- 3) The U.S. exporter must provide the Directorate of Defense Trade Controls a semi-annual report of all their on-going activities authorized under §126.5. The report shall include the article(s) being produced; the end-user(s); the end item into which the product is to be incorporated; the intended end-use of the product; the name and address of all the Canadian contractors and subcontractors.

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* An “X” in the chart indicates that the item is excluded from use under the exemption referenced in the top of the column. An item excluded in any one row is excluded regardless of whether other rows may contain a description that would include the item.